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	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Error Count
1	BRS	L1	8690	proteoglycan	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:04			0
2	BRS	L2	681	extract\$3 same proteoglycan	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:04			0
3	BRS	L3	229052	acetic adj acid	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:05			0
4	BRS	L4	21	2 same 3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:08			0
5	BRS	L5	20578	cartilage	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:08			0
6	BRS	L6	12	4 same 5	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:16			0
7	BRS	L7	5833	ethanol same saturated same (sodium adj chloride)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:18			0
8	BRS	L8	2	6 same 7	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:18			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
9	BRS	L9	2	precipitat\$3 same 8	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:19			0
10	BRS	L10	60340	dialyz\$3 or dialysis	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:19			0
11	BRS	L11	0	9 same 10	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:19			0
12	BRS	L12	5	takagaki adj keichi.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:20			0
13	BRS	L13	1	12 and 4	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/02/09 16:20			0

> d his

(FILE 'HOME' ENTERED AT 16:22:41 ON 09 FEB 2004)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA'
ENTERED AT

16:23:10 ON 09 FEB 2004

L1 85452 S PROTEOGLYCAN
L2 6950 S L1 (P) EXTRACT?
L3 297456 S ACETIC ACID
L4 48 S L2 (P) L3
L5 25 S L4 (P) (4%)
L6 168978 S CARTILAGE
L7 6 S L4 (P) L6
L8 4 DUPLICATE REMOVE L7 (2 DUPLICATES REMOVED)
L9 9 DUPLICATE REMOVE L5 (16 DUPLICATES REMOVED)
L10 3 S L9 (P) L6
L11 0 S L10 NOT L8
L12 53 S ETHANOL (P) SATURAT? (P) (SODIUM CHLORIDE)
L13 0 S L12 (P) L8
L14 18 S PRECIPITAT? AND L12
L15 0 S L8 AND L14
L16 320943 S DIALYZ? OR DIALYSIS
L17 2 S L16 AND L8
L18 0 S L17 AND L12
L19 703 S TAKAGAKI K?/AU
L20 2 S L19 AND L4
L21 2 DUPLICATE REMOVE L20 (0 DUPLICATES REMOVED)
L22 0 S L21 NOT L7

=> log y

FILE 'MEDLINE' ENTERED AT 16:23:10 ON 09 FEB 2004

FILE 'CAPLUS' ENTERED AT 16:23:10 ON 09 FEB 2004
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FILE 'AGRICOLA' ENTERED AT 16:23:10 ON 09 FEB 2004

=> s proteoglycan
L1 85452 PROTEOGLYCAN

=> s l1 (p) extract?
L2 6950 L1 (P) EXTRACT?

=> s acetic acid
L3 297456 ACETIC ACID

=> s l2 (p) l3
L4 48 L2 (P) L3

=> s l4 (p) (4%)
L5 25 L4 (P) (4%)

=> s cartilage
L6 168978 CARTILAGE

=> s l4 (p) l6
L7 6 L4 (P) L6

=> duplicate remove l7
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L7
L8 4 DUPLICATE REMOVE L7 (2 DUPLICATES REMOVED)

=> d l8 1-4 ibib abs

L8 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:157148 CAPLUS
DOCUMENT NUMBER: 136:163703
TITLE: A method for extraction and purification of cartilage
type proteoglycan
INVENTOR(S): Takagaki, Keeichi
PATENT ASSIGNEE(S): Kakuhiro Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1182209	A2	20020227	EP 2001-117771	20010801
EP 1182209	A3	20030205		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

JP 2002069097	A2	20020308	JP 2000-251071	20000822
US 2002045735	A1	20020418	US 2001-916250	20010730

PRIORITY APPLN. INFO.: JP 2000-251071 A 20000822

AB The present invention relates to a new method for extn. and purifn. of
cartilage type proteoglycan, and is to provide a method for extn. of crude
proteoglycan characterized by the use of acid as eluting solvent of
cartilage.

L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:490169 CAPLUS
DOCUMENT NUMBER: 137:277009
TITLE: Effect of proteoglycan on experimental colitis
AUTHOR(S): Majima, Mitsuo; Takagaki, Keiichi; Sudo, Shin-ichiro;
Yoshihara, Syuichi; Kudo, Yoshiaki; Yamagishi, Shohei
CORPORATE SOURCE: Kakuhiko Co. Ltd., Aomori, 030-8543, Japan
SOURCE: International Congress Series (2001), 1223(New
Developments in Glycomedicine), 221-224
CODEN: EXMDA4; ISSN: 0531-5131
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of ***proteoglycan*** (PG) on colitis was examd. in animal expts. using mice. The PG used was ***extd*** from nasal ***cartilage*** of salmon head with 4% ***acetic*** ***acid*** and prepd. by pptn. with ethanol followed by dialysis. The PG contained about 7% protein, and had a mol. mass of 344 kDa on SDS/PAGE. The glycosaminoglycan (GAG) sugar chains of the PG were composed of hexosamine, uronic acid and sulfate at a molar ratio of 1.0:1.0:0.7. The mice were divided into a control group and an administration group. The control group was given free access to drinking water contg. dextran sulfate sodium salt (DSS) to induce colitis. On the other hand, the administration group was given free access to drinking water contg. DSS and PG. Then, the time course of survival rates in both groups were measured. In the administration group, the survival rate increased significantly in comparison with that of the control group. The difference in the survival rates indicated that the onset of mouse colitis induced by DSS was inhibited by administration of the PG.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 4 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 76253644 MEDLINE
DOCUMENT NUMBER: 76253644 PubMed ID: 782525
TITLE: Pepsin-solubilized collagen of human nucleus pulposus and annulus fibrosus.
AUTHOR: Osebold W R; Pedrini V
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA, (1976 Jun 15) 434 (2) 390-405.
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197610
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19761020

AB Human nucleus pulposus and annulus fibrosus, obtained at autopsy from patients 7-30 years of age, were ***extracted*** with 2 M guanidine-HCl (pH 5.82) to remove ***proteoglycans***, then stirred with pepsin in 0.5 M ***acetic*** ***acid***, followed by three 24-h ***extractions*** with 1 M NaCl (pH 7.5) and one 24-h ***extraction*** with 2 M KSCN (potassium thiocyanate) (pH 7.2). Pepsin and NaCl solubilized an average of about 30% of nucleus pulposus collagen and 18% of annulus fibrosus collagen. KSCN ***extracted*** a further 34% of nucleus pulposus collagen and only 4% of annulus fibrosus collagen. CM-cellulose chromatography of nucleus and annulus collagen purified from the pepsin, NaCl and KSCN supernatants consistently revealed only one peak, always appearing slightly ahead of the alpha1 position for rat tail tendon type I collagen. Polyacrylamide and SDS-gel electrophoresis consistently revealed only one band with the mobility of alpha1 chains. Amino acid composition of collagen from nucleus and annulus is comparable to those of mammalian and avian ***cartilage*** type II collagen, and distinctly different from those of rat tail tendon and guinea pig skin type I collagens. Periodate oxidation of nucleus and annulus collagens showed that 81% and 67%, respectively, of the hydroxylysine residues survive treatment, compared to 71% for bovine articular ***cartilage*** collagen and 17% for guinea pig skin collagen. Total hexose analysis revealed 1.8 mum and 2.0 mum hexose per mum periodate-stable hydroxylysine in nucleus and annulus collagens, respectively. Ion exchange chromatography showed the presence of glucose and galactose in a ratio of 0.92:1 in nucleus collagen and 1.07:1 in annulus collagen. Pepsin-solubilized, NaCl- ***extracted*** collagen from nucleus and annulus formed native-type fibrils in vitro. The banding patterns of ATP-induced segment-long-spacing precipitates of nucleus and annulus collagens were identical to each other and indistinguishable from those of

cartilage (type II) collagen, but distinctly different from those of rat tail tendon (type I) collagen. These data suggest that the collagen which can be ***extracted*** after limited pepsin attack of human nucleus and annulus is of the form [alpha1 (II)]3.

L8 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1973:54498 CAPLUS

DOCUMENT NUMBER: 78:54498

TITLE: Structural studies on cartilage collagen employing limited cleavage and solubilization with pepsin

AUTHOR(S): Miller, Edward J.

CORPORATE SOURCE: Med. Cent., Univ. Alabama, Birmingham, AL, USA

SOURCE: Biochemistry (1972), 11(26), 4903-9

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Insol. ***cartilage*** collagen was prepd. as the residue from the sternal ***cartilages*** of 10-week-old chickens by exhaustive ***extn*** with M NaCl at neutral pH and 0.5 M ***acetic*** ***acid***. The ***extn*** procedures were totally ineffective in solubilizing ***cartilage*** collagen but were useful as a means of removing ***proteoglycan*** components of the tissue. Amino acid analyses of the insol. ***cartilage*** collagen residue revealed an amino acid compn. closely resembling that of purified .alpha.1(II) chains. Characterization of the CNBr cleavage products derived from insol.

cartilage collagen indicated that they are, for the most part, qual. identical with those previously obsd. in CNBr digest of .alpha.1(II) prepd. from sol. ***cartilage*** collagen. However, 2 addnl. CNBr peptides (designated peptides 14 and 15) comprising a total sequence of 21 amino acids derived from a nonhelical region of the ***cartilage*** collagen mol. were identified. Incubation of insol. ***cartilage*** collagen in 0.5 M ***acetic*** ***acid*** contg. pepsin (ratio of collagen: enzyme = 10:1) at 4.degree. for 18 hr solubilized 60-70% of the collagen. Characterization of the pepsin-solubilized ***cartilage*** collagen with respect to chain compn., mol. wt. of the component .alpha. chains and CNBr cleavage products of the chains indicated that the collagen was solubilized as monomeric mols. of the chain compn., { .alpha.1(II) }3, and that the proteolytic activity of pepsin on the native

cartilage collagen mol. is confined to relatively short sequences represented by the CNBr peptides, 1,4,14,15, and the CO2H-terminal portion of peptide 7. These results indicating that the cited sequences do not participate in collagen helix formation and that they are localized at the extremities of the .alpha.1(II) chains comprising the ***cartilage*** collagen mol. have been used, in conjunction with addnl. data on the location of peptides 1 and 4, to establish that the order of the CNBr peptides in the carboxy-terminal region of the .alpha.1(II) chain is: 7-14-15. These results further indicate that failure to detect peptides 14 and 15 in the CNBr cleavage products of .alpha.1(II) prepd. from soluble ***cartilage*** collagen resulted from nonspecific proteolytic activity during ***extn*** and purifn. of the collagen. It is proposed that the mechanism whereby the proteolytic activity of pepsin alters the soly. properties of ***cartilage*** collagen involves, at least in part, the degradation of the sequence represented by peptide 4, thus effectively eliminating a site of intermol. cross-linking known to occur in this sequence.

=> d his

(FILE 'HOME' ENTERED AT 16:22:41 ON 09 FEB 2004)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 16:23:10 ON 09 FEB 2004

L1 85452 S PROTEOGLYCAN

L2 6950 S L1 (P) EXTRACT?

L3 297456 S ACETIC ACID

L4 48 S L2 (P) L3

L5 25 S L4 (P) (4%)

L6 168978 S CARTILAGE

L7 6 S L4 (P) L6

L8 4 DUPLICATE REMOVE L7 (2 DUPLICATES REMOVED)

=> duplicate remove l5

DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L5

L9 9 DUPLICATE REMOVE L5 (16 DUPLICATES REMOVED)

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=> s 19 (p) 16
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L56 (P) L38'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L58 (P) L39'
  4 FILES SEARCHED...
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L60 (P) L40'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L62 (P) L41'
L10      3 L9 (P) L6

=> s 110 not 18
L11      0 L10 NOT L8

=> s ethanol (p) saturat? (p) (sodium chloride)
  4 FILES SEARCHED...
L12      53 ETHANOL (P) SATURAT? (P) (SODIUM CHLORIDE)

=> s 112 (p) 18
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L80 (P) L89'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L81 (P) L91'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L82 (P) L93'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L83 (P) L95'
L13      0 L12 (P) L8

=> s precipitat? and 112
L14      18 PRECIPITAT? AND L12

=> s 18 and 114
L15      0 L8 AND L14

=> s dialyz/ or dialysis
'DIALYZ/' IS NOT A VALID FIELD CODE
For a list of field codes for the current file, enter "HELP SFIELDS"
at an arrow prompt (=>).

=> s dialyz? or dialysis
L16      320943 DIALYZ? OR DIALYSIS

=> d his
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FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
16:23:10 ON 09 FEB 2004
L1      85452 S PROTEOGLYCAN
L2      6950 S L1 (P) EXTRACT?
L3      297456 S ACETIC ACID
L4      48 S L2 (P) L3
L5      25 S L4 (P) (4%)
L6      168978 S CARTILAGE
L7      6 S L4 (P) L6
L8      4 DUPLICATE REMOVE L7 (2 DUPLICATES REMOVED)
L9      9 DUPLICATE REMOVE L5 (16 DUPLICATES REMOVED)
L10     3 S L9 (P) L6
L11     0 S L10 NOT L8
L12     53 S ETHANOL (P) SATURAT? (P) (SODIUM CHLORIDE)
L13     0 S L12 (P) L8
L14     18 S PRECIPITAT? AND L12
L15     0 S L8 AND L14
L16     320943 S DIALYZ? OR DIALYSIS

=> s 116 and 18
L17      2 L16 AND L8

=> s 117 and 112
L18      0 L17 AND L12

=> s takagaki k?/au
L19      703 TAKAGAKI K?/AU

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=> s l19 and l4
L20 2 L19 AND L4

=> duplicate remove l20
PROCESSING COMPLETED FOR L20
L21 2 DUPLICATE REMOVE L20 (0 DUPLICATES REMOVED)

=> s l21 noit l7
MISSING OPERATOR L21 NOIT
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l21not l7
MISSING OPERATOR L21NOT L7
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l21 not l7
L22 0 L21 NOT L7

=> d his

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L9 9 DUPLICATE REMOVE L5 (16 DUPLICATES REMOVED)
L10 3 S L9 (P) L6
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L17 2 S L16 AND L8
L18 0 S L17 AND L12
L19 703 S TAKAGAKI K?/AU
L20 2 S L19 AND L4
L21 2 DUPLICATE REMOVE L20 (0 DUPLICATES REMOVED)
L22 0 S L21 NOT L7

=> log y

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